FOREIGN AGRICULTURE

December 1962

Poultry market, Lisbon

Our "Problem" Commodities in the EEC

The North American Livestock Economy

Portugal's New Farm Plan

UNITED STATES DEPARTMENT OF AGRICULTURE · FOREIGN AGRICULTURAL SERVICE

To report and interpret world agricultural developments

FOREIGN AGRICULTURE

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Foreign Agriculture—A Weekly

Beginning in January 1963, we are increasing our service to readers by converting the 26-year-old monthly *Foreign Agriculture* into a weekly publication.

Joining the new weekly will be our long-established *Foreign Crops and Markets*. The reliable and timely information that *Foreign Crops and Markets* has brought to U.S. commodity and trade groups every week for almost 43 years will be an important department in the new magazine.

The merger of the two periodicals is part of a move to strengthen and speed up FAS coverage of world agricultural news in keeping with the increasing importance of export markets to U.S. farmers and traders.

Foreign Agriculture will continue to carry feature-length articles of analysis and prediction by U.S. and world authorities, but its weekly publication schedule will permit far greater coverage of world news and trade potentials than has been possible on the monthly basis. Newly installed teletype communications between FAS and its agricultural attachés in Hamburg, Tokyo, and The Hague will further shorten the distance between the U.S. farmer and the world's biggest importing area.

Stronger emphasis, too, will be put on coverage of U.S. market development activities abroad and on international programs and policies affecting U.S. trade, such as the Common Market, GATT, and the international wheat and coffee agreements.

Those wishing to subscribe to the new weekly should use the coupon on the back cover of this issue. Those on the free mailing list of *Foreign Crops and Markets* or *Foreign Agriculture* will be extended the same courtesy by the new publication.

Cover Photograph

Poultry is cut to customer's orders at Lisbon produce market. Portugal has embarked upon a new farm plan (see page 19) stressing livestock and forage but also aimed at raising its low calorie diets. (Photo by H. K. Ferguson)

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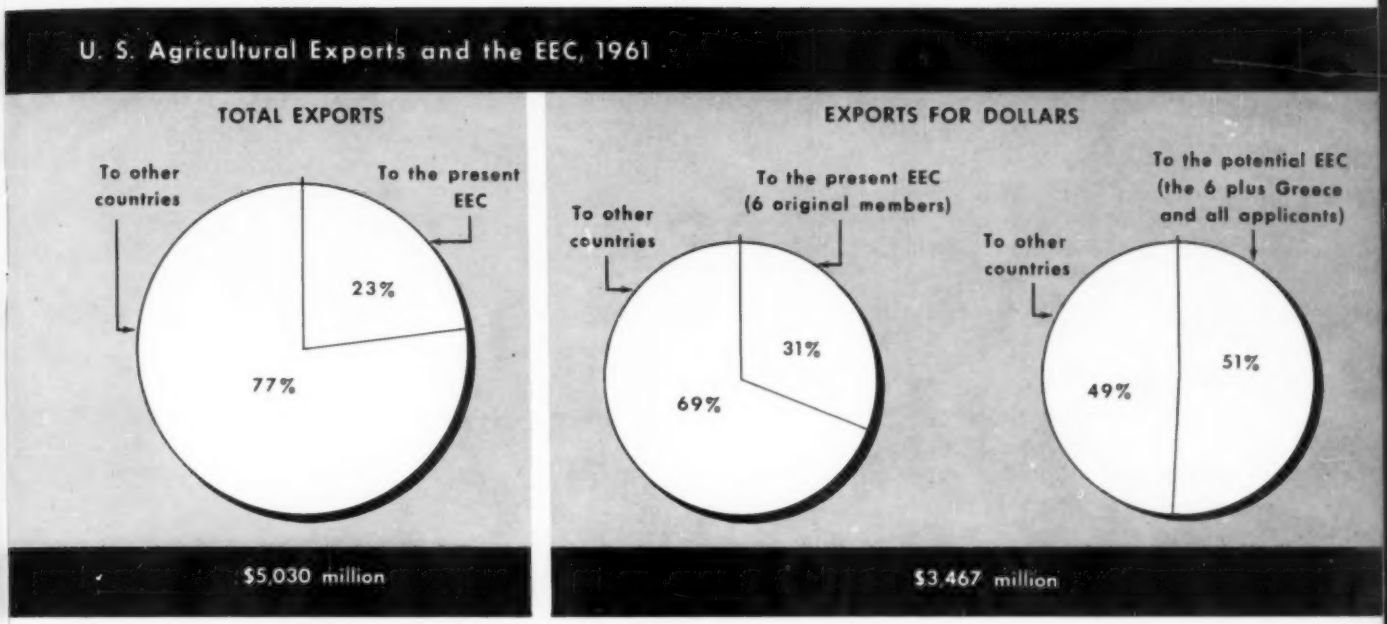


Our "Problem" Commodities in the EEC

—and how we are trying to obtain more liberal treatment

By RAYMOND A. IOANES,
Administrator
Foreign Agricultural Service

Our thinking about the European Common Market has changed considerably with the passage of time. A few years ago when the Common Market was launched, we saw it as a development fully meriting U.S. support and encouragement. We were right about that, of course. At the same time, many of us thought that substantial growth of this new market area might be a long time in coming. We missed the mark there.

The Common Market has amazed the world—and, I dare say, even its founders—by achieving spectacular success within a relatively short time. Today, the Common Market is an economic giant—our biggest single foreign customer for farm and industrial products. We are increasingly aware of its present and potential importance in the foreign trade field.

Article adapted from the talk given by Mr. Ioanes at the 40th Annual National Agricultural Outlook Conference, Washington, D.C., November 13, 1962.

This change in our viewpoint has been amusingly pictured by a European cartoonist. He shows in one panel of his drawing a kindly, indulgent-looking Uncle Sam feeding a lion cub from a nursing bottle. The cub, with "EEC" on his collar, is small but lively. That is the cartoonist's idea of the way U.S.-Common Market relationships shaped up back in 1957. The second panel shows his appraisal of the situation in 1962. He pictures a huge, grown-up lion holding in his lap a small, worried-looking Uncle Sam. The lion seems friendly—but he certainly looks as though he wouldn't want to be pushed around.

No Longer a Cub

The lion is still growing. Although the United States had, in 1961, a gross national product over 2½ times as big as that of the Common Market—$519 billion against $200 billion—the Common Market's growth rate is almost twice what ours is.

The lion is growing in physical size as well as in economic strength. Just 2 weeks ago Greece became an associate of the Common Market. That may be only the beginning. Turkey, Austria, Sweden, Switzerland, and Spain also are seeking some form of association. The United Kingdom, Ireland, Denmark, and Norway have applied for full membership. Should all applicants join the Community, and if overseas countries and territories affiliated with them in trade or other capacity are included as associates, the population of the Common Market would total 485 million, in contrast to the U.S. population of about 185 million.

As I mentioned earlier, the Common Market is a prime outlet for American goods. The area is of particular importance to American agriculture. In 1961 the Common Market took 23 percent of our total agricultural exports to all destinations. That same year it bought 31 percent of all U.S. agricultural exports sold for dollars. And if all applicants for full membership or associate status had belonged to the Common Market in 1961, our dollar exports to the "en-

larged" marketing area would have accounted for 51 percent of the farm products we sold abroad for cash—over half.

American agriculture sincerely hopes that the Common Market will follow liberal trade principles in the development of its Common Agricultural Policy. All countries participating in liberalized, reciprocal trade tend to benefit.

The hopes of U.S. agriculture have been realized on some products. When it comes to commodities which the Common Market either does not produce at all, or produces in small volume, we are in good shape. On the list are cotton, soybeans and products, tallow, hides and skins, certain fruits and vegetables, and some other farm products. We can expect our exports of these to the Common Market to expand as the trading area expands. These commodities account for about 70 percent of our exports to the area.

The "Problem" Commodities

For the remaining 30 percent of our agricultural shipments to the area, the outlook is less favorable. The biggest problem is the possibility that the Common Market, in formulating its Common Agricultural Policy, will maintain high producer prices for wheat, feed grains, rice, and poultry—prices which will be "insulated" by variable import levies from the price effects of commodities produced in non-EEC countries. Under that system, Common Market producers of farm commodities subject to variable import levies could have absolute protection against imports, depending upon price support levels established within the Community.

Not all of our difficulties trace to variable import levies. On tobacco, for example, the Common Market has established a duty structure that is not advantageous to our higher-priced, higher-quality leaf. We had, up to recently, a specific duty of 12.8 cents a pound in the Common Market —on the basis of average incidence. Now we have an ad valorem duty of 28 percent, with a maximum of 17.2 cents a pound and a minimum of 13.2 cents. Most U.S. tobacco will pay the maximum duty rate, whereas the lower-quality, lower-priced tobacco produced elsewhere will be admitted at the minimum rate.

Progress to Date

What are the chances of obtaining more liberal treatment for our "problem commodities"?

All of us concerned with the matter of trade access have been working hard to improve the American position. We know that we will have to redouble our efforts in the months ahead and this will be done. We have already made headway. Here are some of the accomplishments:

Quality wheat: The Common Mar- has agreed that if the Common Agricultural Policy results in reductions in our historical trade, corrective action will be taken.

Flour: Because we have a small but steady market for flour in the Netherlands, we have urged that the over-protection given flour through a variable import levy system be moderated. We have not gained our point thus far but we are continuing to press the Common Market for remedial action.

Wheat, corn, grain sorghum, and poultry: The Common Market recognizes that the Common Agricultural Policy for these products and particularly the variable levy system may make trading prospects cloudy for third countries. The Common Market has agreed that further negotiations on trade access are needed at an early date. Also, strong representations have been made by President Kennedy to Chancellor Adenauer regarding the potential harmful effects of the rise of protection given to poultry in Western Germany. This has led to action by the German Government which we hope will result in some reduction in the levy.

Rice: The United States has stressed the trade-damaging effects that a proposed variable levy program could have. There has been considerable support for the U.S. position, and thus far the variable levy system has not been put into effect.

Tobacco and vegetable oils: Common Market officials are well aware of U.S. dissatisfaction with the tariff levels negotiated for these products at the 1961 conference under the General Agreement on Tariffs and Trade (GATT). They have assured us that they are prepared to consider reduction in these duties during the next general round of tariff negotiations.

Quantitative restrictions: The strongest possible action has been taken to encourage the removal of remaining quantitative restrictions imposed by some of the Common Market countries on items where we have obtained reciprocal tariff reductions. In the recently concluded GATT negotiations, formal proceedings have been instituted which will result in our withdrawing tariff concessions from two of these countries, unless they make satisfactory progress in eliminating restrictions. This will be especially helpful to the U.S. fruit industry.

Situation Fluid

We would certainly acknowledge that this is a fluid situation where negotiations and representation and just plain day-to-day haggling will take place in the years ahead. Regulations are improperly written, or if properly written, sometimes improperly interpreted. It will take time to obtain adjustments, and we do not deny that in certain cases we will bump up against cold, hard protectionism. We are already doing so. We must meet it when it occurs—head-on.

One thing in our favor is the new Trade Expansion Act of 1962, which became law only this fall, and which gives us new authority to take to the bargaining table. For one thing, it will enable us to offer the Common Market and other trading partners deep and broad tariff cuts on their goods in exchange for concessions on U.S. farm products.

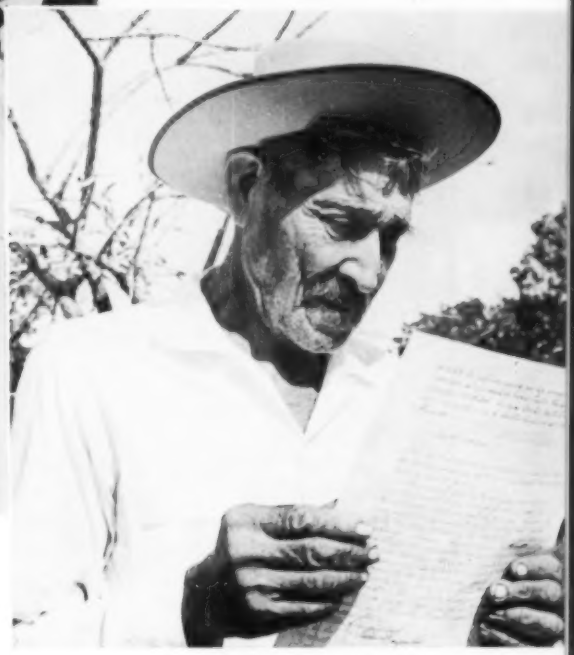
In this area there are many opportunities for trade "swaps." The Common Market has been selling us only a small volume of farm products, because the area is not primarily agricultural, but has been shipping us a big volume of industrial goods. It would like to ship us more. We can use many of the industrial goods the Common Market produces; and the Common Market, we are convinced, can use more of our farm products.

But market access is not the entire story. Access must be accompanied with intelligent, persistent market development work. Market promotion

(Continued on page 14)

Venezuela—Land Reform in Action

Big moment in the lives of Venezuela's campesinos is the day they receive their free title to a parcel of land. Goal is 150,000 families resettled.



Photos courtesy National Agrarian Institute

By GEORGE H. DAY, U.S. Agricultural Attaché
EDWARD QUINONES, Assistant U.S. Agricultural Attaché
Caracas, Venezuela

Several thousand permanent land titles already given out constitute Venezuela's chief claim to leadership in South American agrarian reform. If the government is able to reach its goal of resettling 150,000 rural families by early 1964—and further step up the awarding of permanent land titles—much of the strength may go out of the Venezuelan's cry of "land for the landless."

There would remain, of course, another 50,000 rural families living at subsistence levels for which the government has announced its intention to find land. Although some feel the government should concentrate first on getting the original settlers firmly established, others argue that efficiency must be sacrificed to expediency and that only speedy land redistribution will avert serious unrest.

These 200,000 represent the hard core of Venezuela's subsistence farmers—the laborers, tenants, and squatters who until a few years ago were the forgotten people of Venezuelan agriculture. They had benefited hardly at all from the commercial development of oil which since the 1920's has so markedly raised the nation's income and international trade. Representing about 20 percent of Venezuela's 7.5-million population, the subsistence farmers have had little or no real land tenure rights and have worked with techniques of the most primitive nature. The campesino lived by gathering uncultivated fruit, clearing a little land with his machete so that bananas, yuca, beans, and corn could be planted. He worked the soil with a crude stick and, when the land would yield no more, he moved on. He has been primarily a man outside the market, contributing little, if anything, to the Venezuelan economy.

Improvement of living conditions for these marginal farmers through land distribution, credit and other services was one of the major aims of President Rómulo Betancourt's incoming government in 1959. Little had been accomplished by previous governments—although under a program of agrarian resettlement begun in the late 1940's, the *Instituto Agrario Nacional* (IAN) had distributed some 5,500 land parcels. However, since distribution was largely for political reasons, the basic problem was essentially untouched. Meanwhile, the problem of large concentrations of land was being deepened by the trend toward large-scale operations which made more productive units larger as they consolidated other farms or expanded into new areas.

Agrarian Reform Law

In 1960, soon after the election of the Betancourt government—a potent part of whose strength derives from organized rural labor and small farmers—the Agrarian Reform Law was

House-building in the new settlements is often a community effort. Some of the land is being worked collectively too.

Campesino's daughter learns to disc the land. At the start the government gives settlers considerable technical help.

passed. It is the law under which Venezuela's land distribution program is now operating. In anticipation of its passage, some farmers had already moved onto unoccupied land, and the law was later used to legalize this.

In effect, the law declares that all farming and related operations are in the public interest and subject to government regulation. Its aim is to substitute a just system of ownership for the old system of absentee ownership of large units of land. The law provides that agricultural land not fulfilling its "social function" can be taken over.

The law's goal is to provide each farm worker, or farm family possessing little or no land, with enough land to achieve economic independence through increased agricultural productivity. It attempts to guarantee the rights of farmers to remain on land they are cultivating, favors and protects the development of small and medium farms, and encourages cooperatives. Other goals are to provide irrigation, education, health programs, and other essential community services.

Although much of the impetus behind implementation of the law comes from the Federation of Landworkers, the law's principal executor is IAN. Attached to the Ministry of Agriculture, IAN is an autonomous legal agency with funds independent of the national treasury. It has broad powers to acquire land and raise funds. Lands under its jurisdiction include certain Federal, State, and Muncipal properties and inefficiently used large farms purchased from private owners.

Trial Period

To be eligible for a land grant, the applicant must be over 18 years of age, lack land, or enough of it, and agree to work the land personally, or with his family. Priority is given farm laborers, renters, sharecroppers and settlers, squatters, and laborers already working on land to be granted, heads of families, and those who are trained farmers. IAN may revoke the title if the grantee fails to operate the farm properly.

The law does not specify the amount of time during which a farmer must demonstrate his ability to operate the farm efficiently and his willingness to pay back government loans. In the 3 years since the law's passage about 4 percent of the families settled have received permanent titles and the process should accelerate in the future.

Payment for the land grant begins not earlier than the third year after the colonist receives his provisional title. Then, he is to pay in not less than 20, not more than 30, equal payments. Total yearly payments are not to amount to more than 5 percent of his gross sales of produce.

The balance of the debt may be canceled if the colonist achieves above-average productivity and meets his payments in half the time available. If the colonist is too poor, he may receive his land free. Credit for the first year's crop is a part of the grant.

In practice, land is being given free to farmers. Most of them have no capital and only the few who have felt obligated to pay for the land.

Because of the leniency of payment terms, and the difficulty of expecting one farmer to pay while his neighbor does not, only 10 to 15 percent of Agricultural Bank loans due were repaid in 1960. Collections improved with more stringent payment rules.

In general, the colonist is supposed to receive considerable assistance in getting started. This includes, in addition to the land, technical assistance, credit, homes, community centers, water and sanitary facilities, roads, schools, and processing plants and warehouses where needed. The colonist does not pay for public works for the common benefit, but only the proportionate cost of his land, improvements, and the financing of his first production year.

So far, most of the land parcels have been in the neighborhood of 15 acres apiece. About 40 percent of

Hilling potatoes on new farm in Merida State. Despite some unsettling effects of land reform, country's agricultural production has risen over 30 percent in the last 2 years.

Below, father and son harvest tomatoes for the public market in Cumana—and milking the cows on the St. Mary Cooperative Farm in Yaracuy State.

the land distributed is being worked collectively, but much of this will be parceled once the farmers have demonstrated their worth and boundaries have been established so that permanent titles can be issued.

Land Expropriation Amicable

The maximum size of farms permitted under the law is 375 acres of good land, or up to 12,355 acres of inferior land.

The law allows a certain amount of leeway, though, in that it is unlikely that a well-run, productive farming unit of any size would be expropriated unless absolutely necessary.

However, under the law, payment for expropriated land is so liberal that IAN has been able to pick and choose among those farms whose owners wish to sell. At the end of 1961, about $57 million had been paid for farms totaling a little over 1 million acres, and over one-third was paid in cash.

Payment to landowners is made partly in cash and partly in one of three types of agrarian bonds. The bonds vary in value, the most valuable being used as part payment for land which, though efficiently run, had to be expropriated because it was needed at that site. This Class "C" bond matures in 10 years, is transferable, nontaxable, and yields interest in accordance with the exchange market.

Until about mid-1961 approximately half the settlements had been made on virgin government lands. Pressure for rapid settlement increased, however, and most of the settlements since that time have been on existing ranches or farms. This not only permitted greater speed in land distribution, but was found to be less expensive than clearing, grading, building roads, and providing other public services into new areas.

Resettlement Costly

Between 1959 and the end of 1961, 42,000 families had been allotted land amounting to about 4 million acres in over 500 settlements throughout Venezuela at a cost of over $200 million. The largest development expenditures were for houses, forest clearing, and roads; $57 million went into land purchases. In addition, the Ministry of Agriculture has been spending about $17 million a year on agricultural education, extension, research, and other technical services.

Despite the accomplishments of Venezuela's Agrarian Reform Program many farm leaders are not satisfied with the rate of resettlement, or the amount of technical help, credit, and facilities provided. The criticism, much of it considered valid, has spurred greater efforts to move the program more swiftly and effectively.

It is a tribute to Venezuela and its people that despite the unsettling effects of agrarian reform, agricultural production has risen over 30 percent since 1959, and a 10 percent increase is expected in 1962 alone. Much of this achievement has been due to the willingness of Venezuela's 200,000 commercial farm families to make the investment necessary to increase output and their apparent confidence in the administration of the reform law.

Colombia's Cauca Valley
—a blueprint for regional development

Colombians are reaping the benefits of a regional development scheme begun 6 years ago in the Cauca Valley and considered now to be one of the most successful programs of this type in Latin America.

The Cauca Valley in Western Colombia is the country's richest valley, producing all of Colombia's export sugar and much of its cotton, rice, and coffee. Its land is fertile, rainfall is adequate, and the growing season extends throughout the year. Aided by the regional development program, production has been steadily rising. Cotton yields, for example, are twice those of any other Colombian area.

Land reclamation and the building of power facilities have been the major activities of the development plan, projects which would have been too costly to have been undertaken by the existing farmer, producer, and cooperative organizations in the Cauca Valley. Because the program is decentralized, the entire valley of 1 million flat acres has benefited, regardless of racial, political, and resource differences.

The Cauca Valley Corporation (Corporación Autónoma Regional del Cauca), a public authority established by the government, supervises the program activities. The CVC is patterned after the Tennessee Valley Authority and in fact was set up on the recommendations of David E. Lilienthal, former TVA chairman.

Unlike the TVA, the CVC is managed by private individuals—leaders in industry as well as agriculture who possess a broad range of experience. The directors are appointed on the basis of economic achievement.

The Cauca Valley citizens themselves first saw the need for an integrated scheme which would protect the plentiful resources of the region against such calamities as floods, poor drainage, and sporadic rainfall. Facing some initial opposition, they generated enough interest in the project to impose a special local tax on real estate as the primary means for financing the corporation. Today, among other things, this tax enables the CVC to employ 370 permanent and 400 part-time workers, plus others hired for the construction projects.

After a difficult start, the CVC is now carrying out an extensive electrification project through which electric power has been increased by 150 percent in the last 3 years. The present system produces 100,000 kilowatts; two more plants will be built by 1963.

Along with this, the CVC has developed an elaborate plan for distribution of the electric current, including substations, to serve rural and urban areas as well. Loans from the World Bank and currencies accrued through P.L. 480 sales are supplying the foreign exchange for the power scheme.

The other major project of CVC, that of land reclamation, provided for the drainage and irrigation of 17,000 hectares, some of which will eventually become urban real estate. Another 87,000 hectares, now subject to flooding, will soon be reclaimed.

Help has come from the outside, too. The CVC built a progressive extension service with the technical assistance of Point IV. The United States supplied assistance in establishing a training center on land use and area development at the Universidad del Valle. Consulting U.S. firms also directed engineering studies.

The Cauca Valley program has proved to be a profitable example of what Latin Americans can do to develop resources in a whole region through a well directed scheme, aided by the efforts of the local people. So successful is it that two more development corporations have been started in Colombia since 1960, the Bogota Savanah Corporation and the Autonomous Regional Corporation of the Magdalene and Sino Valleys. Both organizations incorporate the financing and supervisory methods introduced by the CVC, and both have as their objectives electric power and the reclamation of flooded lands.

Above, cows grazing on the Cauca Valley's rich pastureland. Right, Roldenillo, one of the Valley towns that obtained electric power through CVC.

Plump U.S. turkeys browning on a spit attracted big crowds. Also popular was the turkey snack these youngsters are finishing off.

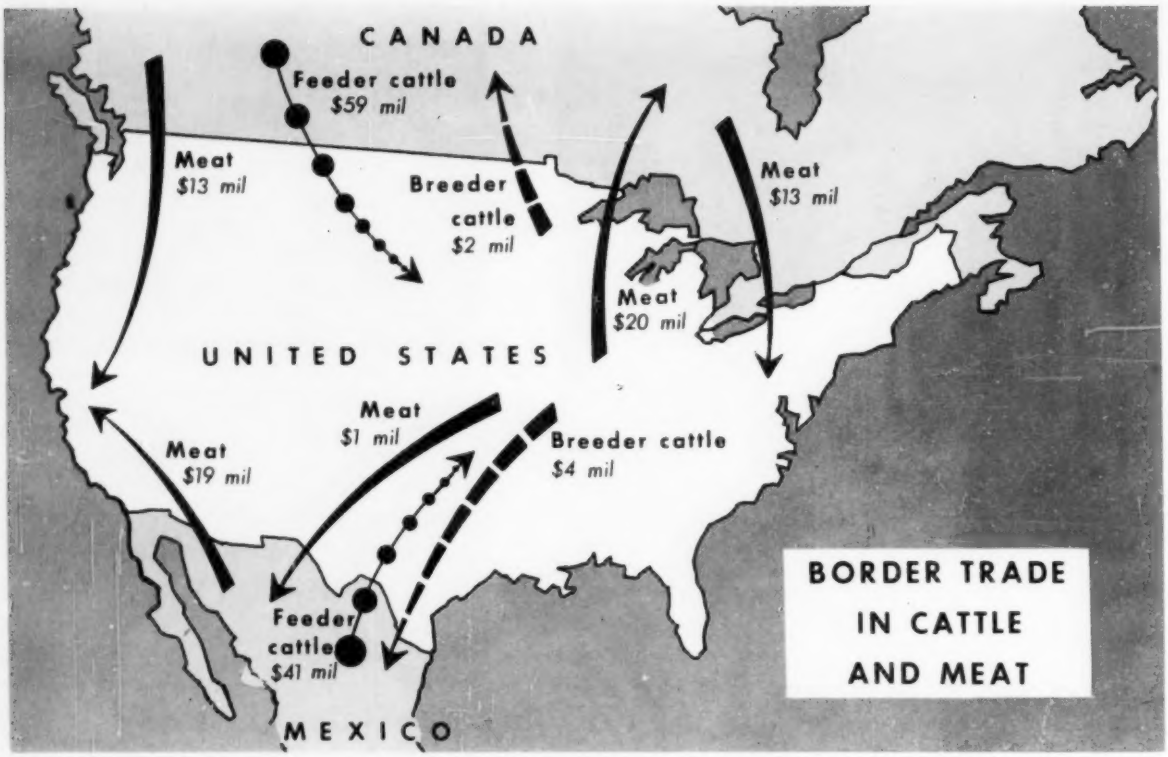
Food and Fun in Brussels

Largest U.S. food exhibit this year took place in Brussels—heart of the Common Market. Here, during October at the 33rd Salon de l'Alimentation et des Arts Menagers (food and household equipment), the United States staged a show that included, among other things, a supermarket with some 700 American food items for sale, a trade lounge for Belgian businessmen, and 7 demonstration kitchens, one of them run by children.

Everyone enjoyed sampling and buying the food and sales were brisk—nearly 6,500 persons making purchases in the supermarket in the first week. But those who had the most fun were the American Girl Scout troop and the Belgian schoolgirls who came in on Saturdays to serve as junior chefs. Packaged foods were their specialty—especially cake and frosting mixes.

Top, Belgians were fascinated with honey sold in dispenser bottles. Above, customer buys a frozen turkey in the "groceria."

Left, Girl Scouts from Brussels' International School had a good time being chefs. Happiest of all is little Karina Schoesetter, above, cutting a cake she baked from a packaged mix.



The North American Livestock Economy

Livestock products worth over $200 million cross U.S. borders each year in a trade mutually profitable for the U.S., Canada, and Mexico

The North American livestock economy—consisting of the combined livestock economies of Canada, the United States, and Mexico—is a relatively new concept although the interrelationship has existed for well over 100 years. Unlike most world trade, which did not flourish until improved transportation could accommodate it, the inter-American trade in livestock started when the first cattle were herded across the Mexican and Canadian borders. Ever since, the three livestock industries have cooperated in trade agreements for a mutually profitable exchange of goods.

The list of traded items includes feeder and breeder cattle, pork, beef, dressed meat, lard, and hides and skins. Every one of these is produced in varying quantities by all three nations. Some of the products, such as beef, compete directly with domestic production in the United States. Others, including feeder cattle, supplement the U.S. livestock economy, although even these pose competition in certain locations.

A Border Trade

This exchange of goods is essentially a border trade, in terms of the origin and destination of the commodities. Livestock products from both Mexico and Canada cannot be distributed economically to all U.S. markets. Thus, live feeder cattle from Canada are shipped mostly to the northern plains States—Montana, Nebraska, Dakotas, Michigan, and Wisconsin. Mexican cattle go to the Southwest—mainly to California, Arizona, New Mexico, and Texas. Beef entering from Mexico is marketed in cities in the Southwest and on the West Coast. Canadian pork is usually consumed in the northeastern part of the United States.

Also, the goods coming into the United States originate in production areas close to the border. Exports from northern Mexico, especially cattle, flow into the United States because transportation difficulties prohibit extensive movement southward to the consuming areas in central Mexico. Canadian exports understandably originate near the U.S. border, since the livestock belt—stretching across parts of Ontario, Manitoba, Saskatchewan, and Alberta—averages only 200 miles in depth in southern Canada.

U.S.-Mexican Trade

Both in volume and in value, the trade across the Mexican border is much smaller than that between the United States and Canada. The total value of the Mexican-U.S. trade was $72 million in 1961, with shipments to the United States from Mexico accounting for most of this—$61 million worth.

From Mexico, the United States has been importing an increasing amount of boneless manufacturing-type beef,

valued at $18 million in 1961. Far more important are the cattle shipments. Livestock producers in the southwestern United States do not raise enough cattle to utilize feed supplies, so that the Mexican cattle are vital to meat production in these areas. Western cattle ranchers, who produce feeders, compete with Mexican cattle for the U.S. market. Nevertheless, since 1913, the United States has been buying around 400,000 head annually, the volume fluctuating with the U.S. cattle cycle, the long periods of drought in Mexico, and the variance in embargoes, import duties, and export restrictions.

Mexico has been a major outlet for U.S. beef breeder cattle for 50 years, taking over 10,000 head last year. Substantial numbers of purebred dairy cattle, hogs, and sheep have been imported by Mexico during the last decade, over 90 percent of which came from the United States.

The volume of U.S. livestock and meat product exports to Mexico is not as great as it might be. In 1961, it was valued at only $11.2 million. Largely responsible for this are Mexico's trade barriers. At present, only U.S. variety meats, hides and skins, and lard enjoy a good market, but even these sales are smaller than they would be were trade not restricted. Import permits from the Ministry of Industry and Commerce are required for most products, including those destined for the "Free Zone" —Lower California and parts of Sonora and Yucatan—which must depend on agricultural imports as its main food source. Imports are also subject to high tariffs, especially those of canned pork and ham.

U.S.-Canadian Trade

The dollar value of the livestock exchange between Canada and the United States is almost double that of the U.S.-Mexican trade—$136 million last year. Since the United States is Canada's biggest outlet for most of its farm exports except grains, the United States and Canada, since 1936, have made reciprocal tariff concessions on agricultural products covering a wide range of border-trade items. Those for livestock have proved to be particularly beneficial in that U.S.-Canadian tariffs have almost been equalized.

As a result of these moderate tariffs, whenever Canada has a short supply of meat, U.S. imports usually supplement its domestic requirements. Thus, U.S. imports tend to impose ceilings on Canadian livestock and meat prices. When Canada's meats are in surplus relative to current demand, these may go to the United States if the same type of meat is not in surplus in the U.S. market.

Canada sells the United States about three-fourths of its total meat shipments and virtually all of the slaughter livestock it exports. For Canada, this trade has meant sales worth nearly $100 million in 1961. Feeder cattle accounts for the bulk of the total value, almost $60 million. Meats, mostly pork products, are also important, amounting to $30 million. The outlook indicates higher sales this year, since Canadian exports to the United States are one-third greater in value for the first half of 1962 than those for a corresponding period a year ago.

U.S. Exports Up

U.S. sales to Canada, while less impressive in total value than U.S. purchases, still form an important part of the North American livestock trade. The trend for shipments to Canada is upward—these have almost doubled in the past 5 years. U.S. sales for livestock and livestock products were valued at nearly $38 million in 1961, up $10 million from the previous year.

Meats accounted for $20 million of the U.S. trade in 1961—nearly $12 million pork and $7 million beef.

As would be expected, Canada's tariffs favor imports from the Commonwealth countries. Australia and New Zealand pose the strongest threat for the United States in the Canadian market. Considering their low transportation costs, U.S. suppliers have advantages over most third-country exporters.

Only once—in the period between August 1952 and February 1960—has Canada completely banned U.S. livestock products. U.S. hogs and pork were prohibited as part of a program to prevent entry of vesicular exanthema disease, which then plagued the U.S. hog industry. Lifting of the ban in 1960 greatly stimulated trade: Canada's total pork purchases jumped nearly 15 million pounds in 1960 from the low level of 1.1 million in 1959, and, in 1961, the United States was shipping Canada 37 million.

Trade Hindrances

Normally, the only impediment to trade in livestock between the United States and Canada is the relatively low tariffs imposed by both countries. Canada, however, is now embarked on a so-called austerity program aimed at improving that country's balance of payments. Temporary surcharges, combined with import duties, are a part of the new program. Applied to a long list of commodities, the surcharges range from 5 to 15 percent ad valorem, and no country is exempted. Under no circumstances, however, may the duties plus the surcharges exceed the rate for a commodity under the General Tariff.

Also aimed at solving a balance of payments problem is the new fixed exchange rate for the Canadian dollar. The Government of Canada issued an official policy for lower exchange rates, beginning June 1961, to stimulate Canadian exports. The exchange rate continued to decline slowly until it was stabilized in May 1962 at 92.5 cents. The devaluation, of course, has discouraged U.S. exports to Canada to some degree.

Despite the surcharges and unfavorable exchange rate, the United States will probably gain an increasing share of the Canadian market in the years to come. The outlook for U.S. meats in Canada depends on whether that country can meet its growing requirements for meat products. In the last 15 years, Canada's red meat disappearance has risen by about 50 percent. Present per capita consumption stands at 139 pounds, but this is still 22 pounds short of the U.S. figure.

As Canada's meat requirements increase, suppliers in the United States should be prepared to bridge the gaps which may occur when demand exceeds the supply. U.S. sales to Canada could also be bolstered through cooperation between the United States and Canada on matters favoring Canadian economic growth. In this manner, people on both sides of the border will profit.

Bolivia's Agriculture Stages Slow Comeback

By CLARENCE E. PIKE
U.S. Agricultural Attaché
Lima, Peru

Bolivia's farmers, conditioned by centuries of tradition, cling to small, unproductive farms in the heart of the Andes. Below lie thousands of acres of arable land whose development, difficult to be sure, has long been overshadowed by Bolivia's mineral wealth. Such minerals as tin, antimony, and tungsten provide almost 90 percent of the country's foreign exchange. Agriculture—which supports most of the population—is so underdeveloped that one-third of the food supply must be imported to maintain what, even then, is probably the lowest caloric intake in South America.

Of all the factors contributing to the current status of Bolivia's agriculture, none has had more influence in the past decade—both good and bad—than the agrarian reform law of 1953. When the law was passed, 92 percent of the country's farmland was owned by 6 percent of the landholders. With the breaking-up of the large estates into small subsistence farms, agricultural production—never high—plummeted disastrously. In the scramble for food and property, livestock was slaughtered, seed supplies eaten, and property was taken without legal action. Even now, though 175,000 families have been granted titles under the law, few farmers feel secure in ownership, since no compensation has been paid former owners as provided in the law.

The agrarian revolution, however, has resulted in a greater distribution of land ownership and the assimilation of more of the people into the economic, political, and social life of the country. Today the lot of the *campesino* is slowly improving. Agricultural production—difficult to estimate because of lack of statistics—is believed to be again at pre-1953 levels.

Largely responsible for the improvement are the gradual "digestion" of changes brought about by the reform law, the awakening of the *campesino's* interest in more than subsistence farming, and the rising productivity of land being developed by colonists.

Considerable assistance has been rendered Bolivian agriculture by the United States, and to a lesser degree by FAO and other international organizations. The joint U.S.-Bolivian Agricultural Service (*Servicio Agricola Interamericano*—SAI), founded in 1948, is still working in such areas as agricultural extension, research, engineering, economics, and supervised credit. In addition, the bulk of the $8 million worth of local currency made available since 1961 through P.L. 480—Title I shipments by the United States of wheat, flour, rice, and recently of cotton—has been devoted to economic development.

Though all of this has helped, a real breakthrough in Boliva's agriculture can come only through intensive education, widely available farm credit, and colonization to siphon off excess population from the highlands (the *Altiplano*) to productive new land.

Agricultural Areas

About half of Bolivia's people live on the *Altiplano*, a high central plateau where most of Bolivia's farming is carried on. Production is low because of the cold and variable temperatures, insufficient rain, and the soil's low fertility and widespread erosion. Uneconomic farm units and antiquated methods also take their toll.

Despite these handicaps, only recently have a few Bolivian farmers begun to leave the overcrowded *Altiplano* for the lowlands (the *Llanos*) which possess great possibilities for future agricultural production. Within the past few years, however, colonists from Okinawa, Japan, Italy, and Mennonites from Paraguay and Canada have settled in the Santa Cruz area of the *Llanos* and have begun to make an increasing contribution to agricultural production.

The third area, the *Yungas* region, in which some 30 percent of the people live, is a semitropical region of mountains and valleys on the eastern slopes of the *Cordillera Real*.

Village plaza and church, near La Paz. Most of Bolivia's farming takes place on this high plateau.

Though some of these valleys, too, are overcrowded, much of the land has excellent potential for development.

Subsistence Farming

Because of the country's isolated position and poor transportation, as well as its primitive farming methods and land tenure problems, the bulk of Bolivian farming is at a subsistence level. Little moves from the immediate area in which it is grown. Agricultural exports are almost entirely confined to rubber, Brazil nuts, and coffee. All told, they make up less than 10 percent of the country's foreign exchange earnings.

Bolivia is dependent upon imports for a very substantial part of its requirements of wheat and wheat flour, dairy products, fats and oils, as well as a considerable quantity of meat. The United States and Argentina are the principal sources of wheat, wheat flour, and lard; sugar has come mostly from Peru.

Most food imports go to consumers in the cities and larger towns. Countryfolk, who make up the bulk of the population, depend upon local production, usually their own. Many of them eat no meat except an occasional guinea pig, or rabbit.

The average *campesino's* diet is im-

Bolivian farmers have trouble getting their crops to market. Above, rubber is brought by ox team to a river port. Right, mountain road in high Andes.

Photos, Pan-American Union

Above, hand-harvesting rice in Santa Cruz. Right, coffee drying in trays. Both crops are important to country's economy.

Extension work has benefited from foreign aid. Below, teacher demonstrates new tractor, and, right, mountain people learn how to grow turnips.

proving, as production of various crops begins to pick up. Rough estimates for 1962 forecast record output for corn, sugarcane, and rice. (The 1962 outturn of corn is expected to reach 300,000 metric tons.) Most of the increases come from comparatively "new" acreage in the lowland Department of Santa Cruz.

Bolivia expects to be fully self-sufficient in sugar production by 1965 and will then import only minor quantities of specialty sugar products. The country also anticipates needing no further imports of rice in the near future, although it has taken 2,000 tons of rice from the United States under Title I this year.

Bolivia's second largest crop—in terms of acreage—is barley, with an estimated annual outturn of around 66,000 metric tons. Potatoes are a major crop on the *Altiplano*.

Commercial production of wheat has not yet recovered from the upheavals of agrarian reform. *Campesinos* on what were formerly large wheat-growing estates have continued to farm their own plots, but growing wheat for commercial sale has been largely abandoned. Consequently, most of the wheat flour used in the cities is imported, though the country has several flour mills.

Bolivia imports almost all its vegetable oil requirements as only minor quantities of oilseeds are grown in the country. Bottled cooking oil comes from Argentina and Peru, lard from the United States, Argentina, and the Netherlands. The physical facilities of Bolivia's one vegetable oil mill are good, but the mill has never crushed in excess of 15 to 20 percent of capacity in any one year.

There is not much of a market locally for oilcake, since the dairy and poultry farmers, located largely in the Cochabamba Valley, are not as yet interested in concentrate feeds. However, an excellent new government-owned milk plant which has been built by joint U.S., U.N., and Bolivian funds may provide a good market outlet for the valley's dairy farmers and, in turn, stimulate demand for oilcake.

There are approximately 2 million beef cattle in the country, most of them in the northern jungle department of El Beni. But, because there are no roads into El Beni, cattle must be slaughtered and the meat flown to market centers at high cost. As a result, El Beni cattle production is going down, and beginning to increase in Santa Cruz and other areas more accessible to roads.

The quality of Bolivian sheep is slowly improving, partly through the increased use of imported rams on experiment stations. The number of sheep, currently at about 5.7 million, is climbing. Swine numbers are also on the upgrade, particularly around Santa Cruz where cheap feed is abundant. Poultry also seemed to be increasing, though recently the trend has been reversed because of various poultry diseases. Poultry meat is very popular, and quite expensive.

Farm Credit and Roads

Almost across-the-board there is a visible, though moderate, improvement in agricultural production, though Bolivia will undoubtedly continue to be heavily dependent on imported wheat, wheat flour, and dairy products for some time to come. The need to import vegetable oils and lard may wane in 4 or 5 years, if the planned solvent-process oil mill materializes along with the increase in vegetable oil crops in the Santa Cruz area.

Farming on the *Altiplano* may switch from field crops to forage crops in order to feed increased livestock. Forage crops suitable to the area have been developed and a beginning made in seed reproduction and getting the seed to the farmers.

Roads and greatly increased farm credit (now available almost entirely through SAI and to relatively few) are important segments of the blueprint for progress which Bolivia has submitted to the Alliance for Progress. Both would materially help the country's farmers to step up productivity of "old" land and bring into production "new" land awaiting cultivation.

Development of the whole Bolivian economy, including agriculture, should reduce the need for relatively high levels of both U.S. aid and U.S. concessional sales of agricultural commodities. In the long run, such development should bring higher living standards and permit commercial imports of U.S. farm products.

Our "Problem" Commodities

(Continued from page 4)

has helped us increase sales of poultry in Germany. It has helped us expand soybean oil exports to Spain. It has helped to expand tobacco sales to Japan. Exports definitely can be expanded if we provide foreign customers a high-quality product, pricing it competitively, and making a determined effort to sell it.

The United States is sponsoring agricultural market promotion, not only in the Common Market but in over 50 other countries. These are cooperative programs, carried on by the Foreign Agricultural Service with the assistance of over 40 trade and agricultural groups. Since 1954 the Federal Government has put in for market development work about $55 million, and cooperators—U.S. and foreign—over $23 million for a total of $78 million. It has been money well spent.

Which should come first—market access or trade promotion? Market access, obviously. However, it sometimes is possible through trade promotion to encourage dismantling of trade barriers. Nothing is to be gained certainly by assuming that a trade barrier, no matter how formidable it looks, needs to stand forever.

Protectionism Outdated

It is easy to put more emphasis on problems than on opportunities. There may be a tendency, in the case of the Common Market, to look too closely at the dark side. I sometimes catch myself doing that. But in more contemplative moments I feel that events will turn out better than many now think is possible. I can't believe that the highly developed economies of the world will permanently live behind screens that protect their agriculture unduly.

Agricultural protectionism does not meet the needs of consumers at home, nor is it conducive to expanding trade between nations that must live together. In a period when economic development is taking place almost everywhere in the world, agricultural protectionism is an anachronism.

Problems we have—and in abunddance. But we should come out ahead. In the next decade total trade can hardly go any way but up.

Typical living quarters on a privately owned tea estate. Indonesia's best tea usually comes from these estates—though their factories are becoming obsolete.

Indonesia's Tea Problem

By CARL O. WINBERG
U.S. Agricultural Attaché, Djakarta

When the International Tea Regulation Scheme was started in 1933, Indonesia—then the Netherlands East Indies—was given an export quota of 174 million pounds compared with 348 million for India and 228 million for Ceylon. Indonesia is still the third-ranking exporter but its foreign shipments have fallen off tremendously. In the 1960-61 marketing year, Indonesia's tea exports registered only 86 million pounds while India's totaled 430 million and Ceylon's 410 million.

Unfortunately, the immediate future does not look much brighter. Though Indonesia has the land, the climate, and the labor needed for tea production, prospects for greater output or better quality are not promising.

There are many reasons for this rather pessimistic forecast, among them the war damage and subsequent political events, the Indonesian Government's current policy with regard to production and marketing, and the demand for tea in the world market, including merchandising requirements.

When the territory that is now Indonesia was taken by the Japanese in 1942, tea exports, at least to the traditional markets, ceased. The occupation period was very hard on the plantations and tea factories, and the tea industry never fully recovered. Then in 1957 and 1958, the Dutch left Indonesia, taking with them years of experience in the growing, processing, and marketing of tea.

Government Control

With the exodus of the Dutch, the Indonesian Government took over the ownership and management of many of the tea estates and at the same time subjected the privately owned estates to various government controls. As a result, the tea industry is now confronted with those problems that usually arise from nationalization or strict government control of any agricultural industry. Furthermore, there is a reluctance to face up to changing conditions as well as an unwillingness to invest sufficient funds to improve operations and expand production.

Not only are the plantings in Indonesia for the most part old ones, but the factories are outmoded and quality control is practically unknown. Consequently, there has been a marked decline in quality. This is especially true on the government-owned estates where it is difficult to maintain the

Freshly picked tea leaves are brought to the weighing stations twice a day, each carrier shouldering two baskets.

After weighing, carrier obtains receipt for amount of tea delivered. Country's output is large, but exports are down.

Tea leaves are spread by hand on racks to dry. Industry demands considerable hand labor, much of it done by women.

old-fashioned machinery and where equipment and supplies are short. The tea sold brings low prices; it is not standardized nor is it the product most desired on the world market.

Private estates fare better, for there is better pay and greater incentive, and more local currency is plowed back into the estate. But they too are short of equipment and supplies that must be purchased abroad, and their factories also are becoming obsolete.

(In a discussion with officials of one of the largest privately owned group of estates, they said that they were maintaining the area now in production but were not expanding. One reason given was that, though tea was profitable, it was not up to rubber.)

Wanted—Better Marketing

The departure of the Dutch growers disrupted the traditional destinations of Indonesian teas. Holland is no longer the big market. Some tea is sold by private estates to tea buyers abroad, some by the government tea export agencies directly to buyers, and the balance at auctions in Antwerp and Hamburg. Most of it is sold on a F.A.Q. (fair average quality) basis to tea brokers who resell it and consequently are interested in the lowest prices possible.

Experts in the marketing of tea, especially the big buyers, are confident that Indonesia could better the quality of its tea exports and improve its marketing system. This, however would require many changes.

In the production of better-quality teas, more care and effort, especially by the government estates, should be given to handling and factory operations. There is need for training in new techniques, and no such training center exists in Indonesia today. Tea producers, including the government, should provide facilities for local blending of tea, as well as a local tea auction. And were Indonesian growers to establish qualities and types that can be sold on mark alone and less on the basis of F.A.Q., they would probably do much better in the London tea auctions than they now do in Belgium and West Germany.

No Rehabilitation Program

Indonesia's 8-year plan for economic and agricultural development, to be completed by 1969, makes no mention of a specific program for the rehabilitation and expansion of the country's tea industry. And without extensive training in the processing and marketing of tea and large investments in the estates and factories, neither the quality nor the quantity of tea exports can be expected to increase. There is even the possibility of a decided drop-off if the world's tea surplus becomes larger, and if Indonesian teas are not up to the grades and standards that are in demand among the world's tea drinkers.

The alternatives are either to accept abnormally low prices or to improve quality and merchandising methods. And even though tea is an important source of foreign exchange, exceeded only by rubber, petroleum, tin, and copra, it is doubtful if Indonesia is in a position to make these improvements. Many other crops need rehabilitation too, and Indonesia does not have the funds available.

Still, there are things that could be done without a large expenditure of foreign exchange. Growers could improve their cultural and processing practices through finer plucking, more efficient use of factory machinery, and less handling of the tea during processing. Modern grading systems could be set up, with fewer grades, and more attention could be paid to giving the buyer what he wants. Also, small amounts of foreign exchange could be effectively used to train Indonesians on the job and in other countries and to purchase spare and replacement parts for the tea factories.

Moroccans Building New Sugar Refinery As Center of Rural Development Scheme

In May 1963 Moroccans will be eating home-grown sugar for the first time since 1955 when a French firm abandoned the only sugar operation in Morocco. The Moroccan Government intends to introduce sugar beet cultivation and is now constructing an extraction and refinery plant.

The plant itself will form the core of a rural development scheme involving the building of a modern livestock industry, the redistribution of landholdings, and the settlement of seminomadic tribes in the area.

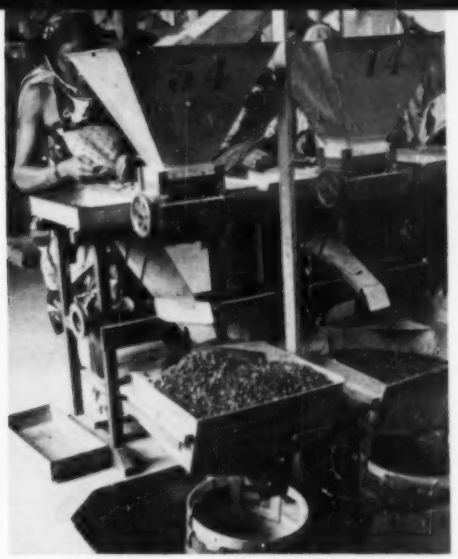
Moroccans now import 350,000 tons of sugar to satisfy their annual consumption of over 70 pounds per capita. They cannot hope to meet the requirement immediately, but the sugar venture will provide other benefits—higher incomes for Moroccans, more meat and milk, and new markets for Moroccan industrial goods. It should also create 4,500 permanent jobs.

Morocco has employed a Polish firm to build the sugar refinery near Sidi Slimana in the Rharb, a fertile area in West Central Morocco. The plant, covering about 100 acres, will be the center of a "Sugar Beet Polygon," a growing area of nearly 200,000 acres, although only about 17,000 will come into production during the crop year that started September 1962. At least 100,000 tons is expected from the first planting.

The Poles are training factory personnel, some in Poland. Probably at first the Poles will operate the plant and will provide technicians.

Along with the beets, the government will introduce about 40,000 head of cattle, Dutch and Tarantaise, for an estimated production of 16 million gallons of milk and about 7,000 tons of meat per year. The herd will feed on the beet byproducts and on forage crops raised in rotation with the beets, and, in turn, will provide manure for fertilizer.

The whole complex, to be finished in 7 or 8 years, will cost about $60 million and will include the building of nine more sugar plants. The Polish-Moroccan trade and payments agreement is financing most of the $12 million cost of the first plant. Besides, the Polish International Bank for Construction has opened a 7-year credit, equivalent to $5 million. The Moroccan Government's equipment budget will pay for the rest.



Photos by Gordon R. Schlubatis

Top left, sisal growing in the shadow of Mt. Kilimanjaro; above, processing seed beans in the Northern Province. Left, coffee grown at high altitudes near Nairobi is spread out to dry. Country's food basket is helped by crops grown on its mountain land and some of its biggest export crops are produced there too.

East Africa's Mountain Agriculture

Farming generally stops where mountains begin but, in tropical areas like East Africa, it is the altitude and rainfall of the mountainous areas that make agriculture possible at all.

By ROBERT E. ADCOCK
Agricultural Officer
Nairobi, Kenya

Famous mountains of East Africa—Kilimanjaro, Mt. Kenya, the Ruwenzoris—and lesser known ones such as the Aberdares, Meru, and Elgon are far more than tourist attractions. They have provided rich volcanic soils and lifted the land surface to mile-high altitudes at the Equator, making arable land of what would otherwise be deserts of sand and thorn brush. Little wonder that tribes in early days placed their gods at the tops of snowcapped peaks arising from the desert floor.

The development of each area is interesting, but Mount Kilimanjaro and Meru in the north of Tanganyika are most significant. Two modern towns have grown up in the Northern Province in which these mountains "live": Moshi, at the foot of Kilimanjaro, population 13,726, and Arusha, near Meru, population 10,038.

Three-fourths of Tanganyika's high-grade coffees are produced in this Province (U.S. coffee drinkers took over half of Kenya's coffee last year, including both the low-grade Robusta and the quality high-grown Arabica, almost $1 million worth in all.)

The Northern Province contains less than 10 percent of Tanganyika's land but produces over one-third of its corn, much of which is shipped to deficit areas and exported. During the past 2 years, however, winds failed to bring the usual water-bearing clouds into East Africa, and the perimeter of productivity drew back to the mountains' edge. Even the 19,300-foot peak of Kilimanjaro failed to tap enough cloud moisture.

Famine conditions developed and corn, the basic diet of the African population, had to be supplied from the outside. The need of people in neighboring Provinces who depended on the northern surplus was more serious.

P.L. 480 corn has bridged the gap. This U.S. assistance has brought America to mean something personal to these people. The big drought of 1961

will be remembered a long time, but such periods of rainfall shortages seldom occur and normal crops will soon replace U.S. emergency food.

Even wheat is produced on the side of Kilimanjaro. Tanganyika consumes 35,000 long tons a year; its Northern Province produces about 11,000 tons, thanks to the high altitude and cool nights provided by the mountain.

A sugarcane plantation at the lower edge of the area, producing about 30,000 tons of sugar per year, is irrigated from water originating in the mountain. Here also is the country's main commercial source of edible beans and bean seed. Commercial crops of other vegetables also flourish.

From a distance, the entire mountainside seems to be in forest. Along the winding roads are thousands of small holdings where even the huts are covered by tall banana plants. Under the bananas grows coffee and below coffee thrive low-growing food plants like potatoes and beans. Woven everywhere are small irrigation ditches.

If one stops to look more closely at a plot, a dozen or so people appear, apparently from nowhere. (Native population increased in the Northern Province almost 30 percent between 1948 and 1957, whereas the average for the country was about 17 percent.) The population density of the Northern Province is slightly below the country's average of 25 people per square mile, a large share of which is concentrated in the fertile areas created by the mountains.

Unfortunately, the production area does not form a full circle. A portion is blotted out by the rain shadow produced by the mountain itself. To the northwest of Kilimanjaro and Meru are strips of fertile land on which rain almost never falls. Here population thins, dust blows, and economic vegetation is extinct.

Essentially the same situation exists on Mt. Kenya, the Ruwenzoris, and other tall mountains. Together, they add materially to the food basket and export income of equatorial East Africa. Full utilization of the land and water of these mountain oases is by no means attained. However, the Departments of Agriculture in these countries continue to foster new crops and more progressive production practices.

World Raisin Trade Increasing—But Not Fast Enough To Absorb Production Gains

World production of raisins may soon begin to draw ahead of world consumption if the present lag in consumption is not overcome. World trade in raisins, while increasing, is being outpaced by population growth.

An anomaly is that nearly all producing countries eat relatively few raisins on a per capita basis, save for Australia and the United States—and Australia's annual 4.6 pounds per person is far above the United States' 1.52 pounds. Consumption in the Middle Eastern producing countries rarely exceeds 1 pound.

Consumption per person has fallen considerably among nearly all big consumers—and the rise among small consumers has not been enough to make up the difference. In the biggest ones—the United Kingdom, the Netherlands, and Germany—people are eating far fewer raisins now than before World War II, though only the Netherlands has come close to duplicating the 30-percent U.S. drop. New Zealand, at 5.83 pounds per person, still has a higher per capita rate of consumption than any other country, though considerably below its high prewar level of 7.46 pounds.

Eight out of the 9 countries where consumption before the war was less than in the United States have registered gains. Increases for the Scandinavian countries were the most significant, although the prospect is that France and Italy, with a combined population of around 95 million, represent the best potential for the future.

Meanwhile, total production of the Big Five—the United States, Greece, Turkey, Australia, and Iran—is back at prewar levels. These countries account for 94 percent of world output. The United States, which once produced 49 percent of the world raisin pack, now produces only 38 percent. However, U.S. production, too, has now begun to rise again, and is expected to continue to increase in the next few years.

While U.S. output is more than double that of its closest competitor, a far greater percentage of foreign production goes onto the export market. Turkey is the world's leading exporter of raisins, followed by Australia and Greece (first in all dried-vine-fruit exports) and then by the United States and Iran. Where less than one-fourth of U.S. raisins are exported, Greece exports nine-tenths, Turkey four-fifths, and Australia three-fourths of its pack.

All U.S. raisins are raised in California and are usually higher priced in foreign markets than competing raisins. This is due largely to ocean freight rates less favorable than those of competing exporters. However, because of such factors as growing conditions, culture, processing, and packing methods, California raisins enjoy a unique reputation.

Most U.S. raisins go to Europe, as do 75 percent of all raisins in world trade, primarily to the United Kingdom. Japan almost overnight became the United States' best single customer, taking approximately 12,000 tons in 1960-61 and 14,000 last year. The United Kingdom is a close second, with all Europe taking over 34,000 tons of U.S. raisins in 1960-61.

Nearly all Turkey's raisin exports go to Europe, mostly to the United Kingdom. Australia's go principally to the United Kingdom, Canada, and New Zealand. The USSR has become second largest raisin customer for both Greece and Iran, with West Germany continuing in first place.

With production going up among all major raisin producers, a major concern will have to be increased consumption by both old and new markets. Many leaders in the raisin industry feel promotion activities will have to be stepped up—both by individual countries and by the international raisin industry. At the present time, relatively little promotion is being done in most big producing countries.

Note: More detailed information can be found in "Competition in World Raisin Markets." Single copies of this June 1962 publication are free to persons in the United States, and can be obtained at the Foreign Agricultural Service, U.S. Department of Agriculture, Washington 25, D.C.

Left, harvesting pears, Anadia. Below, forage testing plots at research station, Santarem, and cows grazing on irrigated pastures, another research project.

Portugal's New Farm Plan Stresses Livestock and Forage

The expected arrival in the United States in early 1963 of a livestock mission from Portugal to look at U.S. breeding animals is a part of Portugal's new plan for agricultural development. Both livestock and forage are major points in the government's newest effort to increase production, incomes, and standards of living.

The program, which is to cover a 9-year period beginning in 1962, also stresses fruit, reforestation, land and rent reforms, and increased irrigation. However, because of widespread recognition in Portugal of the importance of livestock and forage, observers feel this aspect of the program may be implemented the most rapidly.

Livestock development calls for the purchase of $4 million worth of beef and dairy cattle in the next 6 years. Around $868,000 is to have been spent during the current year to import 60 bulls and 400 females of dairy and beef breeding stock. Importation is considered necessary since indigenous stock cannot meet the country's consumption requirements for beef. Bred for power, Portuguese animals are inefficient feeders, poorly adapted to the best use of forage and pastures.

Between now and 1968, $189,000 is to be spent on sheep and hogs. Plans call for buying 10 boars and 100 sows of purebred swine in the current year, and 20 rams and 100 ewes of dual-purpose purebred sheep.

Meat Demand Rising

The priority given livestock and forage derives logically from Portugal's growing need for meat and the thousands of hectares able to produce forage and meat either lying idle every year, or being inefficiently used. Meat consumption, though low, is outrunning production because of population increases, an expanded tourist trade, and the higher standard of living brought about by industrialization.

Between 1955 and 1960, Portugal had to spend $14 million on meat imports. There is also an unfavorable balance of trade in leather and hides and a growing trade deficit in wool. Wool imports have been climbing each year.

In addition, milk and dairy products are beyond the reach of all but a few Portuguese, and this, coupled with the low meat intake, has resulted in a daily caloric average of 2,500 calories per person, mostly from cereals, fish, and vegetables.

Lack of livestock is also adding to a gradual deterioration of the soil, particularly in the area south of the Tagos River. Crop yields are declining partly due to lack of organic materials.

New Rotation System

Approximately 3 million acres in southern Portugal are the focal point of Portugal's program of increased forage production. There, an old system of rotation—2 years in grain followed by 4 years in fallow—has kept crop production and yearly income small. Agricultural experimental stations in the area have shown that a fivefold increase in income per acre could result from a new rotation system, calling

for the first year in wheat or barley, the second in forage for hay or silage, and the third in improved pasture.

The new system, according to its proponents, could yield almost a million acres of excellent forage capable of sustaining an estimated 600,000 head of beef animals. Slaughter of around a third of these animals could provide an estimated 40,000 tons of beef a year.

The major government contribution would be the production and distribution of selected seed at subsidized prices. During 1962 and 1963, seed prices would have a 50-percent subsidy. This would decrease by 10 points each 2 years thereafter through 1970.

Livestock-forage development is also to include technical assistance and "official services to farmers," funds to help them make the investments needed, and the maintenance of fair prices for agricultural products.

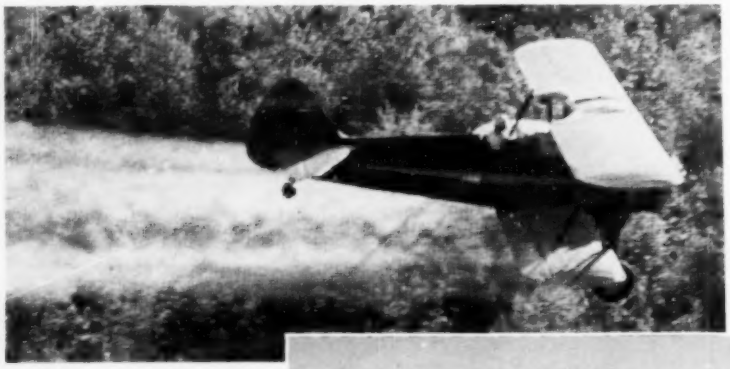
Another agricultural goal is the development of fruit. Figs have long been a fairly sizable export, but the new program wants to put around 62,000 acres into other fruits, both deciduous and citrus.

Irrigation Projects Underway

Irrigation and reforestation come in for new emphasis under the plan. Although both have been underway for a number of years, not too much has been achieved because of lack of funds. Construction work on irrigation projects stopped last year for this reason, though irrigation is vitally needed in the South. Now, however, a $38.5-million loan from West Germany will supply funds, a third of which will go into four projects to irrigate a 115,000-acre area in the South. Plans call for the irrigation of 800,000 acres in all, at a cost of $184.4 million over an 18-year period. The goal for reforestation is to almost double the approximately 6 million acres now in forest.

Redistribution of land is an important part of the government's agricultural program. Serious parcelization of land exists in the North, and quite large holdings still remain in the South. Also, rents are high. However, parts of the corrective legislation introduced before the National Legislature this year are controversial and may result in delays.

Agricultural Aviation Marks Its Jubilee At International Conference in France



Above, plane spreads top dressing over field; right, helicopter takes off on a pesticide-dusting mission. Today some 11,000 planes are used agriculturally—5,000 in the United States.

A half-century ago, a German forest officer submitted to the Imperial Patent Office an idea for the use of aircraft in agriculture and forestry. His concept, though it had to wait 10 years for suitable aircraft, was the grandfather of today's agricultural aviation. This fall, at the Second International Agricultural Aviation Conference, the industry showed that it had reached a prosperous middle age.

The meeting, held from September 19 to 22 at Grignon, France, was attended by 165 people from 22 different countries. Like the first conference (in September 1959 at Cranfield, England), it was sponsored by the International Agricultural Aviation Center (IAAC), of The Hague.

First successful use of this agricultural tool was in 1921, when a World War I "Jenny" biplane eradicated the catalpa sphinx from a grove near Troy, N.Y. Today, close to 150 million acres of the world's farms and forests are being sprayed or dusted yearly from the air—a land area larger than the whole of France. Some 11,000 airplanes are in use, nearly 9,000 of them in the United States and Russia together—5,000 in the United States.

Most useful in countries where there is considerable extension cultivation, agricultural aviation makes valuable contributions in others also. A partial list of countries and crops would include France (colza, vineyards), the United Kingdom (potatoes, orchards, hops), Italy (olives, rice), Spain and Portugal (oaks and pines), and Yugoslavia (sugar beets, cereals).

New uses for agricultural aviation are turning up every day—like agitating the air in U.S. groves and orchards to counteract early frost.

Most striking achievements, however, are in New Zealand and Australia where vast areas are inaccessible by road or rail. New Zealand, which now has 6,500 farm landing strips, has been using aviation for 12 years to apply top dressing, seed and pesticides, drop poisoned rabbit bait, and move equipment. Australia, which got a later start, increased its treated area nearly fourfold in 1959 and 1960.

Molesworth—Experiment in Ranching

Cat Creek holding paddock and yards at Molesworth, New Zealand, where four rundown sheep ranches are now succeeding with cattle. (Photo, Robin Smith.)

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New Zealand, with an area and population only about the size of Colorado's, has the greatest per capita trade of any nation in the world. Much of that trade is in livestock products. Thus, from the government's point of view, any land that can be brought into economical livestock production should be. Perhaps even more important—no land capable of carrying livestock effectively should be allowed to go downhill.

A look at Molesworth, a remote Crown property in the mountainous back country of the South Island, shows how the government practices what it preaches. This large "run"—nearly half a million acres—is made up of four once-prosperous sheep stations that were surrendered to the Crown when they became uneconomic. In the short 13 years since the last station was turned over, Molesworth has been completely transformed. From a failing sheep business, it has become a successful cattle business.

Molesworth attracts a small but steady stream of visitors, both from New Zealand and from overseas. Among them are Americans—ranchers, foresters, conservation officers, professional agriculturists—who have followed with interest the startling success story of this project. Perhaps those who most readily appreciate its meaning are Westerners who have seen the destruction wrought in their own irrigated valleys by rabbits from the deserts—for Molesworth too is fighting the battle of the rabbit.

Trouble With Sheep

The four stations that together make up today's Molesworth were settled early—the first, soon after 1850. But life was hard for sheepmen and for sheep in this difficult back country. Winters were severe and losses by storm frequent; deer and rabbits competed with the sheep for feed. By 1937, the two oldest stations together were carrying but one sheep for every 10 acres. By 1949, all four had been surrendered to the Crown.

This is the story of a high-country sheep run, exhausted and without expectation of life, left to revert to wilderness. The effects of frequent burning and overgrazing through the years were aggravated by a rabbit population so thick that at times whole hillsides seemed to move. Thus the stage was set for frost, wind, and water to denude the land of its none-too-abundant topsoil and native tussock grasses, leaving steep shingle slides, sharp bare gullies and the naked earth as silent testimonials of lessons that man had yet to learn. For many reasons, some beyond the control of the operators themselves, the land ceased to be productive.

The Road to Recovery

First in a series of rehabilitation steps came removal of the sheep, which was quickly accomplished. According to the supervising manager, this country may never again be fully suitable for carrying sheep—though not all the local sheepmen agree.

Second step was reduction of the rabbit population. Rabbits, brought in for sport in 1880, nearly made a complete takeover. Rabbiting has cost nearly $560,000 from the start of the project through 1961. But 1961 costs were only $26,900 (for the air-dropping of 322 tons of carrots, treated with 1080 poison), compared with $62,000 for the previous season. The rabbits seem to be in retreat, though in New Zealand the problem is chronic.

Third step was the sowing of 20,000 acres of grass by air. This emphasis on air-dropping shows that one of Molesworth's top problems is access. In the winter of 1961, one of the outlying huts had to be supplied by air, and later a bulldozer required 3 days to cover a 43-mile stretch so that provisions and horse feed could be brought in. Nevertheless, things do go on in the winter. That year, 5,600 acres were oversown from the air with a

mixture of orchard grass and clover seed—on the snow.

Molesworth Today

The Molesworth country has undergone great changes. Its carrying capacity has markedly increased, and will increase still further as more and more of the higher areas are top-sown. By June 1961, the station was carrying 7,758 cattle compared with 4,440 in 1951. Its profits have climbed steadily. In 1941, they were only $3,000; by 1951, they were $8,000; in 1959, $26,000; and in 1960 and 1961, $57,000 and $59,000.

True, the expense of creating good land from bad has been heavy, and some of the earlier years showed financial losses, but returns in recent years have wiped these losses out. Total development expenses to date, excluding rabbiting, have been about $232,000. Expenditures have borne interest at 4 percent, and the project has paid taxes for access roading.

Most accounts of New Zealand agriculture tell of fertile farms heavily stocked with sheep or dairy cattle that enjoy year-round grazing in the equable island climate. But Molesworth—like much high country on the "mainland" (as South Islanders, with ingratiating pride, frequently call their island)—is different. Though not more than 50 miles from the ocean to either east or west, it is surrounded by high ranges that tend to give it a rigorous climate of the inland continental type.

Winters are cold, with temperatures dropping to nearly zero at times. The first snows can be expected in late April or May, with heavy falls from June to September. On an average, there are only 135 frost-free days a year. Summers are dry and warm, with temperatures reaching the upper 80's. Rainfall varies between 30 and 60 inches a year, depending on elevation and aspect, and is usually limited to early spring and late autumn.

Such a climate requires a high degree of specialized farm management, and Molesworth has it. The 1961 winter was one of the worst in recent years, but the stock came through in excellent condition, only the yearlings showing the effect of hard wintering. The Angus and Hereford breeds are well adapted to this area, and Molesworth considers crosses between the breeds the most profitable combination. Particularly emphasized are cattle with scale and strength of underpinning—qualities that pay off when cattle can graze up to 5,000 feet throughout the winter with no hay or supplemental feed.

New Zealand is understandably anxious about the possible effect of British Common Market membership on prospects for overseas sales of its farm products. In the light of this problem, one might well wonder why the country emphasizes developing new agricultural lands or restoring those that have deteriorated. However, New Zealand takes a long view of this question. In 1958, D.N.R. Webb (now Director-General of Agriculture) pointed out that while more land under development certainly would mean more production flowing onto existing markets, the world's population was increasing at the rate of 47 million a year. "These figures," he continued, "could rightly force the conclusion that the present over-supply of certain primary products is but transitory."

Burmese Millers Buy More U.S. Wheat

Wheat—particularly U.S. wheat—is steadily growing in popularity in traditionally rice-eating Burma.

U Hla, Managing Director of Burma Flour Mills Ltd., and President of the Burma Flour Mills Association (at center), recently showed Larry Diehl, U.S. Agricultural Attaché at Burma, standing alongside, his firm's system of bulk wheat-flour storage, bagging, and distribution. At far right is U Sein Win, the Association's secretary.

This mill is one of six built in Burma since 1957 to meet the rising demand for wheat products among the country's approximately 20 million people. Bread, cake, and macaroni are particularly popular in larger cities like Rangoon and Mandalay, where incomes are higher.

The Burmese now grow about 20,000 tons of wheat each year, but like imported wheat for blending. The first shipment of U.S. wheat went into Burma last year. This, like the most recent shipment of almost 2,000 tons of Oregon wheat, was a dollar sale. The Burmese mills blend 25 percent U.S. wheat with 75 percent domestic.

The United States' Western Wheat Associates began covering Burma in 1957. Their activities, along with those of Burmese flour millers and the Foreign Agricultural Service, have laid the groundwork for what appears to be a promising market for wheat.

TRADING POST

Mexico Imports U.S. Breeding Sheep for Higher Wool Output

As part of its effort to upgrade flocks and become self-sufficient in wool production, Mexico recently bought 25,000 head of Rambouillet sheep from the United States—the largest shipment of its kind since the start of World War II.

The 7,000 rams and 18,000 ewes were destined for ranches and small farms in northern and central Mexico, the center of its livestock industry. Last July, Mexico purchased 20,000 head from Australia, but these were intended to increase fat lamb output.

Value of U.S. Sales to Latin America Lowest in Five Years

Continuing a 5-year downtrend in the value of U.S. imports from Latin America, U.S. takings from that area were valued at $1.6 billion in 1961-62, down $87 million from a year ago.

Price drops in coffee and cocoa accounted for most of the reduction in value—$71 million and $21 million, respectively. Lower value of raw sugar shipments to the United States, off $26 million, was caused by smaller imports. The worth of Cuban exports to the United States dropped $50 million from the 1960-61 figure of $73 million.

Australian Wheat Sales Up; More Goes to Mainland China

Higher wheat imports by Mainland China in 1961-62 pushed Australian wheat and flour shipments up to 232 million bushels, 26 percent more than last year's total. For the third consecutive year, Mainland China's winter grain outturn had been poor, calling for 71 million bushels of Australian wheat to help make up the deficit.

Larger shipments also went to West Germany, Spain, and India. Despite insignificant exports to the Western Hemisphere, Australia for the first time on record sold wheat to Colombia, 516,000 bushels.

Furthermore, the Australian Wheat Board has announced the sale of 25 million bushels of wheat to Communist China, scheduled for delivery from October 1962 through March 1963.

Ecuador Gets $500,000 Loan To Buy U.S. Breeding Stock

An Alliance for Progress loan to Ecuador of $500,000 has recently been approved by the Export-Import Bank of Washington for the purchase of U.S. cattle.

Most of Ecuador's herds are now native stock, which generally give low yields of milk and meat. In a program of the Ecuadoran Ministry of Development, dairy and beef cattle will be acquired to help build up the country's herds. The new loan permits the purchase of about 200 dairy cattle and 400 beef cattle.

Bigger Tobacco Crop Advised By Rhodesian Government

Although the Ministry of Agriculture of Rhodesia and Nyasaland claims that a 5-percent per annum increase in output of flue-cured varieties would not be difficult to sell abroad, the Federation's Tobacco Board feels differently. In their opinion, growers should not increase acreage over that planted in 1961, but should aim for high-quality leaf instead.

The 1962 harvest of flue-cured tobacco was slightly below that of last season because of drought and rapid ripening. Official estimates place the loss at 20–30 million pounds, much of which was caused by insufficient barn space for curing.

Assuming normal weather conditions, the Tobacco Board forecasts a possible flue-cured crop of 260 million pounds next season on existing acreage, 26 million above the 1962 harvest.

Japan Expects To Import More Soybeans in 1962-63

Japan, the major single outlet for U.S. soybeans, is anticipating an 8-percent rise in soybean imports during the Japanese fiscal year, which began April 1962. Japan bought 26 million bushels of soybeans in the first half of this year; 83 percent came from the United States.

Japanese soybean crushers have been appealing to their government for some time to reduce or eliminate the 13-percent duty on soybeans now in effect. Officials studying the recommendation expect to make their decision by April 1, 1963.

Soybean consumption in Japan has expanded sharply in recent years but soybean acreage has declined every year since 1954.

Showboat Promotes Rhodesia-Nyasaland Tobaccos in Europe

The liner *Oranjefontein* recently called at port cities of Northern Europe to display the kinds of tobacco produced in the Federation of Rhodesia and Nyasaland.

The floating exhibit, which also included a pictorial show of the country's tobacco industry, is part of a new drive undertaken by the Tobacco Promotion Council in Rhodesia and Nyasaland to acquaint European buyers with their export tobaccos. The Federation is the biggest U.S. competitor for the flue-cured market.

Germany's Mixed Feed Output Up; More Grains Imported

Mainly because of rapidly increasing livestock numbers, West Germany set a new record for mixed feed production in 1961-62. Output was 4.6 million metric tons, or up 29 percent from the previous year. Hog and cattle feed showed the biggest gains.

At the same time, West Germany took more U.S. feed grains—1.4 million metric tons or double the amount purchased the previous year.

Unfavorable weather and poor pasture conditions in Germany have reduced the hay supply, and it is anticipated that considerable quantities of hay and alfalfa pellets will have to be imported from the United States.

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